

**REMARKS**

Claims 12-18, 38-41 and 56-61 are pending in the application. Claims 12, 15, 17, 38, 56, 58 and 60 are amended, and claims 1, 10-11, 45 and 54-55 are canceled with this response. Claim 2-9, 19-37, 42-43, 46-53 and 62-64 are withdrawn from consideration. Reconsideration of the application is respectfully requested in view of the comments below.

**I. REJECTION OF CLAIMS 1 AND 45 UNDER 35 U.S.C. § 102(b)**

Claims 1 and 45 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,676,194 (Satou et al.). Claims 1 and 45 are canceled with this response, thereby rendering this issue moot. Accordingly, withdrawal of the rejection is respectfully requested.

**II. REJECTION OF CLAIMS 10-13, 15-16, 54-56 AND 58-59 UNDER 35 U.S.C. § 103(a)**

Claims 10-13, 15-16, 54-56 and 58-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Satou et al. in view of U.S. Patent No. 5,036,252 (Lob et al.). Initially, claims 10-11 and 54-55 are canceled with this response, thereby rendering the issue relating to these claims moot.

In light of the amendments made in this response, claims 12-13 and 15-16 now depend upon claim 17, the patentability of which will be discussed below in conjunction with the rejection thereof. Likewise, claims 56 and 58-59 now depend upon claim 60, the patentability of which will be discussed below in conjunction with the rejection thereof.

**III. REJECTION OF CLAIMS 14 AND 57 UNDER 35 U.S.C. § 103(a)**

Claims 14 and 57 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Satou et al. in view of Lob et al. and further in view of U.S. Patent No. 4,963,735 (Okamoto et al.).

In light of the amendments made in this response, claim 14 now depends upon claim 17, the patentability of which will be discussed below in conjunction with the rejection thereof. Likewise, claim 57 now depends upon claim 60, the patentability of which will be discussed below in conjunction with the rejection thereof.

**IV. REJECTION OF CLAIMS 17-18, 38-41 AND 60-61 UNDER 35 U.S.C. § 103(a)**

Claims 17-18, 38-41 and 60-61 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Satou et al., in view of Lob et al., and further in view of U.S. Patent 3,961,103 (Aisenberg). Withdrawal of this rejection is respectfully requested for at least the following reasons.

- i. The cited combination does not teach a first extraction electrode comprising extraction apertures and at least one of the other extraction electrodes comprising interstitial pumping apertures that are not aligned with respect to the extraction apertures, as recited in claims 17, 38 and 60.*

Claims 17, 38 and 60 each recite a first extraction electrode that comprises extraction apertures extending therethrough. The claims further comprise at least one other extraction electrode that comprises ***interstitial pumping apertures that are not aligned with respect to the extraction apertures with respect to a beam axis generated by beamlets passing through the extraction electrodes.*** The combination of the cited art does not teach this feature.

Aisenberg discloses a film deposition apparatus in Fig. 1 in which a constrictor electrode 26 has an aperture 26A, and an anode extraction electrode 24 has an aperture 24A. According to Fig. 1, ***each aperture 24A and 26A are aligned with***

**respect to one another, wherein each share the same axis that is the beam axis.**

Therefore Aisenberg does not teach or suggest the features of claims 17, 38 and 60.

- ii. The cited combination does not teach interstitial pumping apertures having an area that is greater than that of the extraction apertures, as recited in claims 18 and 61.**

Claims 18 and 61 further recite that the interstitial pumping apertures **have an area that is greater than an area of the extraction apertures**. One non-limiting example of this feature is illustrated in Fig. 11, along with description on page 17, lines 9-18 of applicants' specification. The Office Action, in maintaining the rejection of claims 18 and 61, concedes that Aisenberg does not teach relative sizes of the apertures 24A and 26A, but states that the relative sizes would be dependent upon the pressure differential to be maintained. (See O.A., 11/21/07, p. 6, bottom paragraph). Applicant respectfully disagrees. The reference does not provide any indication that the sizes may differ or vary based upon a pressure differential, and **Fig. 1 of Aisenberg clearly shows such apertures 24A and 26A as being the same size**. Therefore it appears as though Office Notice is being taken in the Office Action without explicitly saying so. Without further evidence provided to show that one of skill in the art would modify Aisenberg in accordance with claims 18 and 61, such claims are further non-obvious for at least this additional reason. See MPEP § 2144.03.

Further, the Office Action states that Aisenberg does not explicitly indicate that the apertures 24A and 26A are similar, citing to Cols. 3 and 4 of the cited reference. (See O.A., 11/21/07, p. 2, bottom paragraph). This statement, however, is not the proper standard for whether a reference teaches an element of the claimed invention. Whether an element **could** be different sizes is not sufficient to render a claim element obvious. See MPEP § 2143.01 III (*citing In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992)(holding although a prior art device may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation to do so). Simply because the reference does not explicitly state that the apertures must be the

same size does not mean that one of ordinary skill in the art would be motivated to modify the reference, particularly wherein the apertures 24A and 26A are illustrated as being the same size. Therefore claims 18 and 61 are non-obvious over the cited art for at least this additional reason.

Accordingly, withdrawal of the rejections is respectfully requested.

**V. CONCLUSION**

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, EATNP138US.

Respectfully submitted,  
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